National Aeronautics and Space Administration

NASA's Strategic Capabilities Assets Program

NASA JET PROPULSION LABORATORY
THE 10-FOOT SPACE SIMULATOR

The 10-Foot Space Simulator at the Jet Propulsion Laboratory (JPL) is designed for environmental testing of robotic spacecraft in simulated interplanetary conditions of extreme cold and high vacuum. This chamber is ideal for various test articles that require clean-room and space simulation features. This chamber has supported tests for various NASA projects, including the Widefield Planetary Camera, Aquarius, the Mars Pathfinder, the Mars Exploration Rover Mission, and the Mars Science Laboratory.

TECHNICAL SPECIFICATIONS

Chamber rating	Class 8 (ambient pressure)
Contamination monitoring	QCM, RGA, and NVR
Temperature range (low)	-185 °C
Temperature range (high)	120 °C
High vacuum pumping system	Cryo & turbo
Nominal vacuum pressure	8×10^{-6} Torr
Data recording system	400 channels/15 power supplies
Clean room	Class 7
Crane capacity	5 tons

PHYSICAL CHARACTERISTICS

Chamber dimensions (useable)	10 feet x 25 feet
Chamber orientation	Vertical (bottom loading)
Test article access clearance	10-foot diameter x 15-foot height
Clean room	20 feet x 20 feet

CONTACT INFORMATION

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